

401 KAR 5:045. Biochemically degradable wastes; treatment.

RELATES TO: KRS 224.10-100(1), (5), (15), (19), (21), (23), 224.70-100, 224.70-110

STATUTORY AUTHORITY: KRS 224.01-110(6), 224.10-100(17)

NECESSITY, FUNCTION, AND CONFORMITY: This administrative regulation is necessary to implement KRS 224.10-100(1), (5), (15), (19), (21), (23), 224.70-100 and 224.70-110. It requires a minimum of secondary treatment or best conventional pollutant control technology where applicable for all facilities which received biochemically degradable wastes, and additional treatment in certain situations. The administrative regulation requires that such treatment facilities receiving such wastes reapply to the cabinet 150 days prior to the expiration of the current permit for a permit to continue operating.

Section 1. Definitions. The following definitions and conditions apply to terms used in Sections 3 and 4 of this administrative regulation:

- (1) "Grab sample" means a single instantaneous portion of the effluent.
- (2) "Composite sample" means:
 - (a) Not less than four (4) effluent portions collected at regular intervals over a period of eight (8) hours and combined in proportion to flow;
 - (b) Not less than four (4) combined equal volume effluent portions collected over a period of eight (8) hours at intervals proportional to flow;
 - (c) An effluent portion collected continuously over a period of twenty-four (24) hours at a rate proportional to the flow; or
 - (d) An effluent portion consisting of a minimum of four (4) combined equal volume grab samples taken approximately two (2) hours apart.
- (3) "Arithmetic mean for thirty (30) consecutive days" means the average of a minimum of three (3) samples collected in separated calendar weeks during a period of thirty (30) consecutive days with a minimum of twenty (20) days occurring between the first and last sample days.
- (4) "Arithmetic mean for seven (7) consecutive days" means the average of a minimum of two (2) samples taken on separate days in a seven (7) day period.
- (5) The samples for determining a values of biochemical oxygen demand and suspended solids shall be composite samples. The samples for determining the values of fecal coliform bacteria and pH shall be grab samples and taken at the applicable frequency as noted in subsections (3) and (4) of this section.
- (6) "Day" means a twenty-four (24) hour period.
- (7) "Cabinet" means the Environmental and Public Protection Cabinet.

Section 2. Applicability. All facilities discharging into waters of the Commonwealth which receive an influent which is biochemically degradable shall provide a minimum of secondary treatment to that influent prior to its discharge. if other constituents are present, additional treatment may be required. Those facilities subject to best conventional pollutant control technology treatment requirements pursuant to [401 KAR 5:080](#), Section 1(2)(a)2b shall be exempt from this administrative regulation.

Section 3. "Secondary treatment" is that degree of treatment which results in an effluent quality which meets the following minimum requirements:

- (1) Biochemical oxygen demand, five (5) days.
 - (a) The arithmetic mean of the values for effluent samples collected during a period of thirty (30) consecutive days shall not exceed thirty (30) milligrams per liter.
 - (b) The arithmetic mean of the values for effluent samples collected during a period of seven (7) consecutive days shall not exceed forty-five (45) milligrams per liter.

(2) Suspended solids. These requirements shall be achieved except as provided for in subsection (3) of this section.

(a) The arithmetic mean of the values for suspended solids in effluent samples collected during a period of thirty (30) consecutive days shall not exceed thirty (30) milligrams per liter.

(b) The arithmetic mean of values for suspended solids in effluent samples collected during a period of seven (7) consecutive days shall not exceed forty-five (45) milligrams per liter.

(3) Suspended solids requirements for waste stabilization ponds which are employed as the sole process for secondary treatment and have a maximum facility design capacity of 2,000,000 gallons per day or less and where operation and maintenance data indicate that the requirements of subsection (2)(a) and (b) of this section cannot be achieved shall be equal to that which is achievable with best waste stabilization pond technology. Best waste stabilization pond technology is defined as the effluent concentration achieved ninety (90) percent of the time within the Commonwealth of Kentucky or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality established for biochemical oxygen demand in subsection (1) of this section. This suspended solids value will be determined by the cabinet.

Section 4. Additional requirements for all facilities discharging into the waters of the Commonwealth which receive an influent which is biochemically degradable is that degree of treatment which results in an effluent quality which meets the following minimum requirements:

(1) Fecal coliform bacteria.

(a) The geometric mean of the value for fecal coliform bacteria in samples collected during a period of thirty (30) consecutive days shall not exceed 200 colonies per 100 milliliter.

(b) The geometric mean of the values for fecal coliform bacteria in samples collected during a period of seven (7) consecutive days shall not exceed 400 colonies per 100 milliliters.

(c) For operational purposes paragraphs (a) and (b) of this subsection need only be met during the recreational season of May 1 through October 31. In other months the values stipulated in [401 KAR 5:031](#), Section 7(2)(a), shall be met.

(2) pH. The values for pH shall not be less than six (6) units nor more than nine (9) units.

Section 5. Treatment in excess of that required under Section 2 of this administrative regulation for influents which are biochemically degradable shall be required for a continuous facility discharge where:

(1) The cabinet determines that the receiving waters will not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

(2) The cabinet determines that a facility lacks the sophistication of process to consistently produce the required effluent quality.

Section 6. (1) Any person responsible for an existing facility as described in Section 2 of this administrative regulation which receives biochemically degradable influent shall 150 days prior to the expiration of the current permit make application to the cabinet for a permit to continue to discharge to the waters of the Commonwealth.

(2) If the cabinet determines, from available information or information requested from the applicant, that an existing facility does not or may not produce an effluent with parameter measurements equal to or less than that specified in Sections 3 and 4 of this administrative regulation, it shall require the applicant to submit plans and specifications or other data showing how the facility will be brought into compliance.

(3) If the facility's effluent parameters are equal to or less than that required in Sections 3 and 4 of this administrative regulation, an operating permit shall be issued to the applicant.

(4) If the facility's effluent does not satisfy the requirements of Sections 3 and 4 of this administrative regulation, the cabinet may issue the applicant a permit to upgrade the facility, provided:

(a) No such permit shall be issued unless the cabinet has received and approved a compliance schedule to bring a facility into compliance at the earliest date.

(b) A compliance schedule shall contain a commitment from the applicant to achieve increments of progress to be completed on specified dates.

(c) At a minimum, the increments shall include a date for submitting any additional plans and specifications required for construction, a date for commencement of construction and a date for completion of construction.

(d) Upon request from the cabinet, the applicant shall provide the cabinet with periodic reports regarding progress towards compliance schedule increments.

(5) Failure to meet the dates set forth in a compliance schedule shall constitute a violation of [KRS 224.70-110](#) unless an alternate date has been negotiated by the person responsible for a facility and has been approved in writing by the cabinet. (1 Ky.R. 763; Am. 1383; eff. 7-2-1975; 2 Ky.R. 500; eff. 5-12-76; 10 Ky.R. 430; 888; eff. 2-1-84; TAm eff. 8-9-2007.)